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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,780	12/19/2000	Duane L. Wires	00220	4970

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EXAMINER

BERMAN, SUSAN W

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,780

Applicant(s)

WIRES, DUANE L.

Examiner

Susan W. Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/01</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Objections

Claim 2, line 5, the word “monyl” should be “nonyl”.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-14:

Claim 1 recites “a monomer comprised of...” and then lists at least two different monomers. Does applicant intend to claim “a monomer” selected from the monomers set forth? Does applicant intend to claim a composition (monomer composition) comprising bisphenol A ethoxylate (1 to 4) dimethacrylate and benzylmethacrylate and optionally one or more stabilizing monomers?

Claims 1, 2 and 9-14 set forth weight percents but do not set forth what total weight the recited weight percents are based upon. Therefore, the weight percents required are not clearly set forth.

Claims 1, 7 and 8 are indefinite because it is not clear whether applicant intends to claim a cured resin or to claim a polymerizable composition or to claim a method for curing the polymerizable material. Claim 1 appears to claim a polymerizable composition but then recites that “when exposed to ... is cured”. Claims 7 and 8 recite a polymerizable resin material but then state “wherein the material is exposed to light” or “is cured”.

Claim 9, lines 1-2, is confusing because line 1 recites “polymerizable resin material of claim 1 comprising...” and line 2 recites “lens composition...comprises...” . Does applicant intend to claim a polymerizable resin material or to claim a lens composition?

Claim 10-14 are rendered indefinite by the use of tradenames [e.g., Chromtech Orange PH-2458] in the claims. Tradenamed materials are subject to change and to unavailability. Tradenames should be

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replaced with chemical names or structures or method for preparation of the photochromic dyes intended to be claimed.

Claims 15-34: It is not clear whether applicant intends to claim a method for making a plastic lens or an apparatus for making a plastic lens since the claims set forth numerous details regarding the apparatus provided and used and also sets forth a method for dispensing and curing a specified resin material. In line 19, it is not clear what is intended by the phrase “nonphotoinitiating resin material”. The resin material set forth containing acrylate functional groups is clearly curable by photoinitiated exposure to UV light. The claim recites that the composition is curable by exposure to UV light. Does applicant intend to recite that the lens-forming resin material does not contain a photoinitiator? If so, it should be so stated.

Claim 16 fails to use proper Markush language “selected from the group consisting of ... and 2-phenoxyethyl methacrylate esters”.

Claim 29, lines 1-3, is confusing because lines 1-2 recite “resin material comprises...” and lines 2-3 recite “lens composition...comprises...” . Does applicant intend to claim a resin material or to claim a lens composition? Lines 5-10, fail to use proper Markush language “selected from the group consisting of ... and ethoxylate nonyl phenol acrylate”.

Claims 29-34 recite a “silane”. It is not clear what compounds, monomers, prepolymers, etc. the term “silane” is intended to encompass.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al (5,969,867). Fukushima et al disclose radiation curable compositions comprising 20 to 80 parts by weight of a thio dimethacrylate compound I, 20 to 80 parts by weight of a second methacrylate "B" and a photoinitiator. Component B can be 10-90 parts by weight "B-1", such as 2,2-bis(meth)acryloxyethoxyphenyl) propane and 1 to 50 parts by weight "B-2", such as benzyl methacrylate (column 4, lines 16-51, column 5, line 42, to column 6, line 19, and column 6, line 59, to column 7, line 13, column 7, line 53, to column 8, line 27). UV absorbers are taught in column 8, line 46. Photoinitiators are used in the Examples. Fukushima et al teach curing at wavelengths from 200-600 nm (column 9, lines 20-22). See Example 8. Fukushima et al do not teach adding a "stabilizing monomer", an optional component set forth in the instant claims.

It would have been obvious to one skilled in the art at the time of the invention to provide compositions comprising BPA-2 and BZM in combination because Fukushima et al teach that these monomers are preferred components of the disclosed compositions. Fukushima et al teach that the disclosed compositions can contain as little as 20-30 parts by weight compound of formula I and correspondingly 70-80 parts by weight of a mixture of 10-90 pbw B-1 and 1-50 pbw B-2 monomers. as taught in Example 8, thus suggesting the instantly claimed wt percents. Further motivation is provided by the disclosure of such a monomer mixture in Example 8. With respect to claim 2, the claim, as written, sets forth species of stabilizing monomers but does not require that the **optional** stabilizing monomer is present in the composition.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being obvious over Coleman et al (5,708,064) in view of Garrity (6,174,464, having an effective filing date of 4/30/1996).

Coleman et al discloses a high refractive index photochromic ophthalmic article. The preferred high refractive index monomers include ethoxylated bisphenol A bis(meth)acrylate, styrene, divinylbenzene and diallylphthalate (column 3, lines 16-25). Monomers such as trimethylolpropane triacrylate can be added (column 3, lines 38-40, 48-49). Photochromic compounds are taught in column 6, line 61, to column 7, line 64. Benzyl methacrylate is not mentioned.

Garrity discloses polymerizable lens compositions for photochromic contact lenses. Compositions comprising 80-95 wt % bisphenol A ethoxylated dimethacrylate monomer (formula (I)), 5-20 wt % of an aromatic monovinyl monomer, a photochromic dye and a diazo radical polymerization initiator are taught. Garrity teaches that the lens is obtained from a composition comprising at least two monomers selected from those in column 2; for example, bisphenol A ethoxylated dimethacrylate monomer (formula (I)), an atomic monovinyl monomer and a (meth)acrylic monomer (vi), such as styrene, divinylbenzene and diallylphthalate or benzyl methacrylate (column 2, lines 1-60). The wt % of monomer (vi) is not mentioned. A composition comprising bisphenol A ethoxylated dimethacrylate monomer (formula (I)) and 5-15 wt% benzyl methacrylate is taught in column 6, line 15, to column 8, line 28. Garrity teaches that the refractive index of the photochromic material can be adjusted by a modifying monomer (d), such as divinylbenzene and diallylphthalate or benzyl methacrylate (column 8, lines 20-28). Garrity does not teach a "stabilizing monomer", as set forth in the instant claims.

It would have been obvious to one skilled in the art at the time of the invention to employ or substitute benzyl (meth)acrylate for any of the high refractive index monomers, such as styrene, divinylbenzene and diallylphthalate, taught by Coleman et al in the compositions disclosed by Coleman et al. Garrity provides motivation by teaching that a (meth)acrylic monomer (vi), such as styrene, divinylbenzene and diallylphthalate or benzyl (meth)acrylate, allows for adjustment of the refractive index of a photochromic material in analogous compositions. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of obtaining a useful high refractive

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index photochromic article, as taught by Coleman et al. It would have been obvious to one skilled in the art at the time of the invention to determine the optimum wt. percents of the different monomers, photochromic dyes and other additives to employ in compositions obtained by combination of the teachings of Coleman et al and Garrity. The reason is that the wt. percents set forth in the instant claims are within the teachings of the references and would be expected to provide useful compositions for obtaining photochromic lenses.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 15-34 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,936,197 in view of Coleman et al (5,708,064) in view of Garrity (6,174,464, having an effective filing date of 4/30/1996). Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. The claims of US '197 set forth the same method steps as are set forth in the instant claims. The claims of US '197 are limited to a UV light transparent back mold and UV light exposure for curing while the instant claims recite a light transmissive back mold and curing by visible or UV light or heat. The major difference is that the claims of US '197 do not set forth the specific monomer mix set forth in the instant claims. The claims of '197 require a UV polymerizable material and a photoinitiator. The monomer

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mixture set forth in the instant claims is a species of UV polymerizable material which the claim recites is curable when exposed to visible and/or UV light. Coleman et al and Garrity in combination, as discussed above, teach compositions comprising components as set forth in the instant claims for providing photochromic lenses. It would have been obvious to one skilled in the art at the time of the invention to substitute a composition as taught by Coleman et al and Garrity in analogous art for the composition set forth in the claims of US '197. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing a useful photochromic lens.

Allowable Subject Matter

Claims 10-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The cited prior art cited herein and otherwise known to the examiner does not teach composition comprising the specified components in the specified weight % set forth in claims 9-14.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Widawski et al [US 2002/017350, having an effective filing date of 7/03/1998] . Widawski et al disclose compositions comprising 30 to 100% monomer of formula (I) in the Abstract, and 0 to 70 % of an other polymerizable monomer (II) and a polymerization initiator. Monomer (II) can be a bisphenol A ethoxylated dimethacrylate monomer (IIc) in [0040-0042] and [00047]. Photoinitiators are taught in [0062]. See Examples 2-5. Widawski et al do not mention benzyl methacrylate.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB
12/7/05


Susan W Berman
Primary Examiner
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